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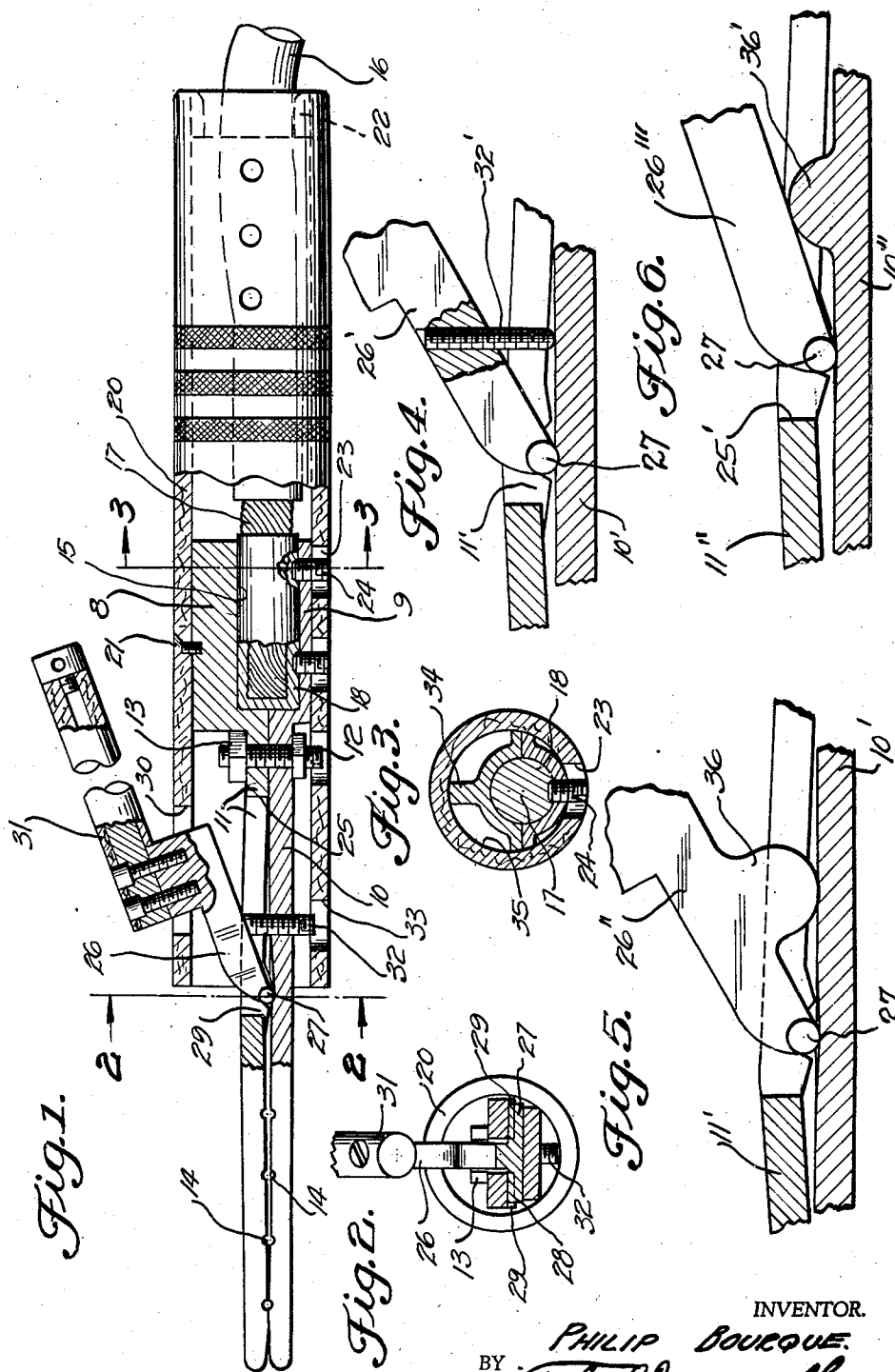
P. BOURQUE

2,283,162

ELECTRODE HOLDER

Filed Oct. 17, 1940

2 Sheets-Sheet 1



INVENTOR.

PHILIP BOURQUE.

BY

Thos. Donnelly
ATTORNEY.

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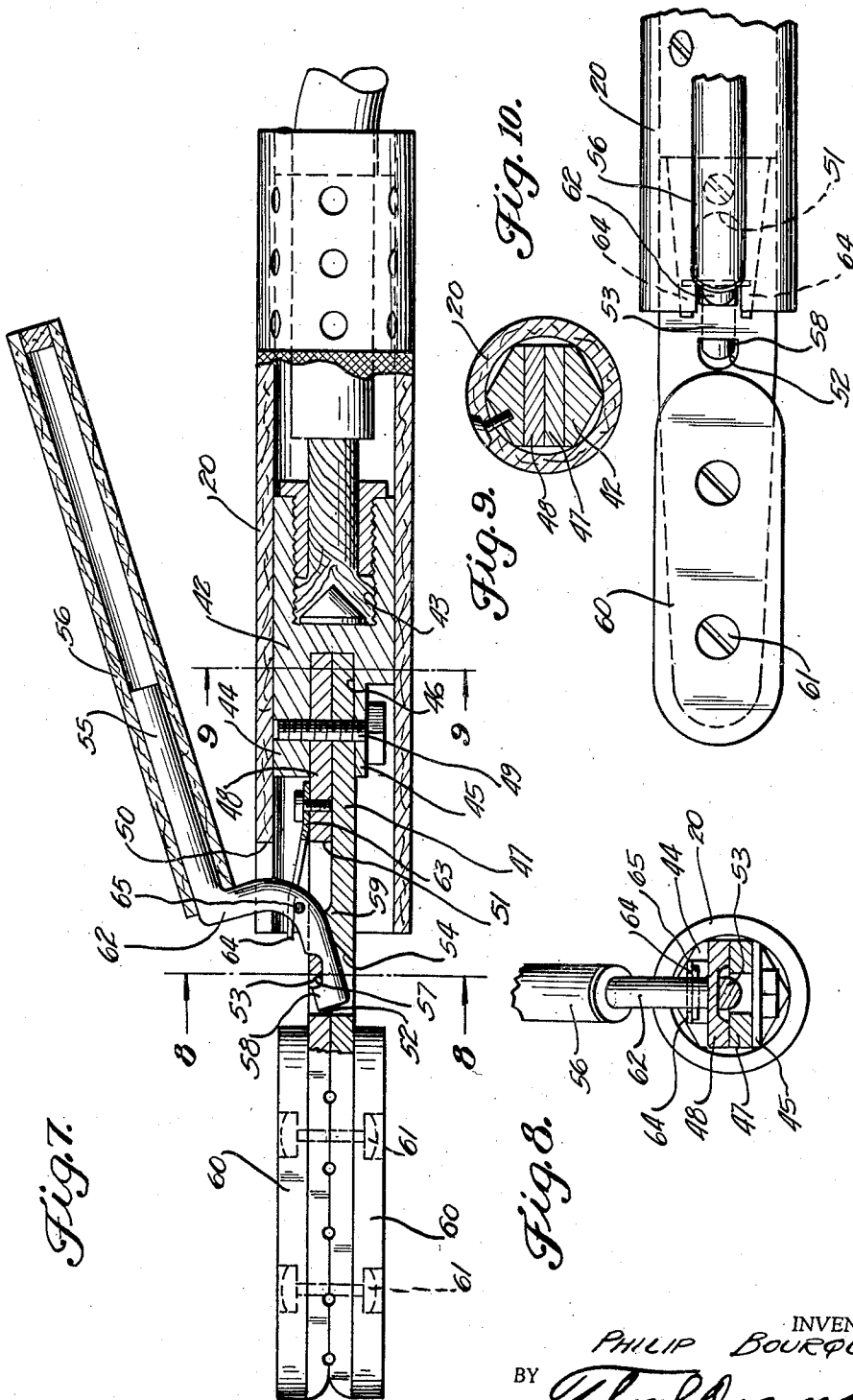
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INVENTOR.
 PHILIP BOURQUE.
 BY *Thos. Donnelly*
 ATTORNEY

UNITED STATES PATENT OFFICE

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ELECTRODE HOLDER

Philip Bourque, Detroit, Mich., assignor to Bordon
Mfg. Co., Inc., Detroit, Mich., a corporation of
Michigan

Application October 17, 1940, Serial No. 361,567

19 Claims. (Cl. 219—8)

My invention relates to a new and useful improvement in an electrode holder for holding electrode wire during an arc welding operation. In these electrode holders, the wire is generally gripped between a pair of clamping jaws. The common type of structure embodies a pair of resilient jaws which are positioned in superimposed relation and spread apart in a suitable manner and by suitable means. A common objection to such a structure is the fact that a grip member is required which projects outwardly from the handle and forms somewhat of a projection.

It is an object of the present invention to provide an electrode holder so constructed and arranged that this grip may project outwardly from the handle a minimum distance.

Another object of the invention is the provision of an electrode holder so constructed and arranged that the tubular insulated handle may be extended well forwardly on the clamping jaws.

Another object of the invention is the provision of a structure so arranged that a rocker member may be used to press against one jaw and lift the other in order to spread them apart.

Another object of the invention is the provision of an electrode holder so constructed and arranged that the conductor or cable may be secured in position and removed therefrom without necessitating the removal of the handle.

Another object of the invention is the provision of a structure so arranged that upon a rocking of the grip, the spread of the jaws may be adjusted to any desired width within the range of the structure.

Other objects will appear hereinafter.

It is recognized that various modifications and changes may be made in the structure without departing from the spirit of the invention and it is intended that such variations shall be encompassed within the claims forming a part hereof.

Forming a part of the specification are drawings in which:

Fig. 1 is a side elevational view of the invention with parts broken away and parts shown in section.

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 1.

Fig. 4 is a fragmentary, sectional view showing a modified form of the invention slightly enlarged.

Fig. 5 is a fragmentary sectional view showing

ing a modified form of the invention slightly enlarged.

Fig. 6 is a fragmentary sectional view showing a modified form of the invention slightly enlarged.

Fig. 7 is a longitudinal central sectional view of a modified form of the invention.

Fig. 8 is a sectional view taken on line 8—8 of Fig. 7.

Fig. 9 is a sectional view taken on line 9—9 of Fig. 7.

Fig. 10 is a fragmentary top plan view of Fig. 7.

In the drawings I have indicated a shank-forming portion comprising a pair of semi-cylindrical parts 8 and 9 projecting forwardly from which are the jaw-forming plates 10 and 11 which are secured together at their rear ends by the bolt 12 and the nut 13. These jaws are formed from resilient material and are in engagement at their forward ends and provided, on opposed faces, with registering grooves 14 to provide wire-receiving passages. When the jaws are sprung apart and a wire positioned therebetween, the jaws, through their resiliency, will serve to clamp the wire securely therebetween so that it may be used for the ordinary purposes. The shank-forming portions 8 and 9 are formed concave on their opposed faces to provide a socket or well 15 in which one end of the conductor may be positioned. This conductor generally consists of a cable having a covering of insulation 16 which serves to cover the electric wires 17. In the construction illustrated, the end of the cable is freed from insulation to provide a bared portion and the wire of this portion is inserted in a cup or sleeve 18 which is soldered thereto or secured thereto in any suitable manner. This sleeve or cup 18 is of such size as to fairly snugly fit the well or cavity 15. A handle 20 formed from suitable insulating material such as fibre or the like is positioned over the shank-forming portion in embracing relation and secured by means of the screw 21. This handle 20 is provided at its rear end with an inset collar 22 through which the cable 16 projects. The handle 20 is provided with openings 23 and at each of these openings there is threaded into the shank portion 9 a binding screw 24 which may be threaded inwardly into binding relation with the covering or sleeve 18 so as to secure the conductor in the well 15 and afford the necessary and desired electrical contact. It will be noted that these screws 24 are accessible through the openings 23 so that the conductor may be secured to

the holder and removed therefrom without necessitating a removal of the handle 20. This also forms one of the objects of the invention as conventional constructions require removal of the handle 20 in order to attach or detach a conductor. By unscrewing the screws 24 the conductor may be released for removal from the well 15 and an inward threading of screws 24 will effect the desired binding or clamping.

The upper jaw 11 is provided, intermediate its ends, with an elongated slot 25. A rocker member 26 is inserted at the end through the slot 25. This rocker member is provided at the inserted end, with a cross head embodying the lateral projections or arms 27 and 28 which are circular in cross section. This cross head serves to lie between the jaws 10 and 11 and straddle the slot 25. Formed on the inner face of the jaw 11 is a projection 29 which has grooves in which the arms 27 and 28 engage so as to prevent longitudinal movement of the rocker 26 relative to the jaws. This rocker member also projects through the slot 30 formed in the handle 20. Secured to the end of the rocker member 26 is a grip or handle 31 which serves as a means for rocking the rocker 26.

Threaded through the lower jaw 10 is a screw 32 which registers with the opening 33 formed in the handle 20 so that the screw 32 is accessible through the opening 33. This screw is located in the jaw 10 so as to register with the rocker 26. The construction is such that as the rocker 26 is rocked downwardly it will engage the screw 32. Upon further rocking the screw 32 will press downwardly on the jaw 10 and the cross head, embodying arms 27 and 28, will lift upwardly on the jaw 11, thus effecting a spreading apart of the jaws at their free ends. By threading the screw 32 inwardly or outwardly the amount of spread may be regulated. Experience has shown that some operators desire a wide spread on the free ends of the clamping jaws, whereas, others desire only a slight spread sufficient for the reception of the electrode wire.

As shown in Fig. 3 the outwardly projecting ribs 34 serve to engage the handle 20 and maintain an air space 35 within the handle so that undue heating of the handle is thus avoided.

In Fig. 4 I have indicated a slight modification of the structure in which the screw 32 threaded through the jaw 10 is dispensed with. Instead of this structure, I thread a screw 32' through the rocker 26'. The operation and functions obtained by the form illustrated in Fig. 1 are obviously obtained by the structure illustrated in Fig. 4.

In Fig. 5 I have further illustrated a modification of the structure and the adjustable feature for regulating the spread of the jaws, which is present in the illustrations of Fig. 1 and Fig. 3, is not present in the structure shown in Fig. 5. In Fig. 5 the rocker 26'' is constructed and functions as does the rocker 26 illustrated in Fig. 1. The rocker 26'' is provided with a boss 36 which projects from the inner face thereof and which serves to engage the inner face of the jaw 10' corresponding to the jaw 10 shown in Fig. 1. The jaw 11' corresponds to the jaw 11 shown in Fig. 1 and is otherwise similar. By rocking the rocker member 26'' downwardly, the boss 36 serves as a means to deliver thrust to the jaw 10' and the cross head serves to deliver it to the jaw 11'.

Fig. 6 is a structure similar to Fig. 5 with a reversal of parts. In this structure the rocker 26 is constructed as shown in Fig. 1. The jaw 10''

corresponds to the jaw 10 of Fig. 1 and is provided, on its inner surface, with the inwardly projecting boss 36' which is in registration with the slot 25' corresponding to the slot 25 of Fig. 1.

As the rocker member 26'' is rocked downwardly after engagement with the boss 36', the boss 36' serve to deliver the thrust to the jaw 10'' while the cross head on the rocker serves to deliver the thrust to the jaw 11'' corresponding to the jaw 11 of Fig. 1.

In Fig. 7 a slightly different form of structure is set out. A shank 42 is formed from hexagonal material and provided with a socket 43 at its rear end. At its forward end the shank is provided with a pair of spaced apart tongues 44 and 45 having a space 46 therebetween into which the butt ends of the jaws 47 and 48 may be positioned, a screw 49 being projected through the tongue 45 and through the jaws 47 and 48 and threaded into the tongue 44 so that the screw or bolt 49 serves as a means for bringing the tongues 44 and 45 into clamping relation with the ends of the jaws 47 and 48. Embracing this shank is the tubular handle 20 having a slot 50 formed in its forward end, the purpose of which will appear. Formed in the jaw 48 is a slot or opening 51 in alignment with and spaced from the opening 52 so that a rib portion 53 which is integral with the body of the jaw 48 lies between the opening or slot 51 and the opening 52. The jaw 47 is provided with an opening 54.

In this form the rocker member is formed from a rod which embodies the stem 55 on which is positioned the tube 56 of fibre or the like to provide an extension of the trigger handle. The stem 55 is angularly turned to provide a rocker portion 62 which is projected at one end through the opening 51 and which is provided, intermediate its ends, with a notch 57 of sufficient width to receive the rib 53. The formation of the notch 57 provides a hook or nose 58 at the forward end of the rocker member which is adapted to engage in the opening 52. Formed on the inner face of the jaw 47 is a fulcrum-forming engagement member or boss 59. When the parts are assembled as in Fig. 7 a downward rocking of the rocker member will effect a spreading apart of the jaws in the manner already described. These jaws are shown provided with layers of insulation 60 secured thereto by means of the screws 61. The upwardly turned portion 62 of the rocker member which meets with the stem-forming portion 55 is accommodated by the slot 50. This construction is such that an easy and quick assembly of the structure may be provided while all of the advantages referred to in the other forms are present.

Secured to the jaw 48 is one end of a bifurcated spring 63 the prongs 64 of which engage a pin 65 which is projected through the rocker and extended outwardly from opposite sides thereof. This spring is under tension so as to prevent rattling and normally maintain the rocker member rocked downwardly into engagement with the boss 59. The pin is also preferably longer than the width of the slot 50 so as to prevent undue removal of the trigger or rocker member from position.

In the various forms shown the member referred to as a rocker or rocker member, such as the member 26 or the member 62, is a simple lever of the first class. In the forms shown in Fig. 1 and Fig. 4 the screw 32 and 32' respectively form the fulcrum. In the form shown in Fig. 5 and Fig. 6 the bosses 36 and 36' respec-

tively form the fulcrum. In the form shown in Fig. 7 the boss 59 forms the fulcrum. In all forms the force is applied to the handle or extension of the lever. In each form the lever has a work applying portion which extends beyond the area or opening or slot through which the lever is projected. In the form shown in Figs. 1, 4, 5, and 6, the work applying portion is the cross head having the lateral arms 27 and 28. In Fig. 7 the work applying portion is that portion of the lever which engages the part 53 of the upper jaw. In each instance it will be noted that the lever is free for movement upwardly and this upward movement is not resisted in the forms shown in Fig. 1, Fig. 4, Fig. 5 and Fig. 6. The upward swinging of the lever is resisted in the form shown in Fig. 7 by the fork spring having the arms or fork 64. But, even in this form, the upward swinging is such that a disassembly of the construction may be had. The function of the spring is to prevent rattling and not to prevent a disassembly of the structure.

If it were desired to disassemble the structure shown in Fig. 1 with the handle provided with a slot which does not extend to the end of the handle 20 as shown in Fig. 1, it would be necessary to back the screw 32 until the member 26 would fall downwardly and lie in engagement with the jaw 10, whereupon the tubular handle 20 might then be slid off the shank. The member 26 might then be rocked upwardly and turned 90 degrees so as to bring the arms 27 and 28 into alignment with the slot 29, whereupon the member 26 might be lifted out. In the form shown in Fig. 7, in order to disassemble the structure it would be necessary to rock the lever upwardly the portion 58 moving downwardly into the opening 54 sufficient to allow the lever to be slid outwardly. In some instances it might be necessary to first remove the spring 63. In both types of construction it will be noted that the lever is not connected to either of the jaws and the lever is not permanently fastened to its fulcrum. In the two forms illustrated it will also be noted that there is a means for preventing movement of the lever longitudinally of the jaws until the lever has been moved out of operating position.

It is preferred that the jaws 10 and 11 be each made from resilient material but it is obvious from the description given, that both of the jaws need not be resilient so long as the springing effect desired is present.

In this manner I have provided an electrode holder which is possessed of greater efficiency and which serves to produce the advantages enumerated while avoiding the disadvantages referred to.

What I claim as new is:

1. In an electrode holder of the class described, a pair of resilient clamping jaws in superimposed relation and secured together adjacent their rear ends and springable apart at their forward ends for the reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein intermediate its ends; a lever projected at one end through said opening; a force applying portion on said end of said lever extended beyond the area of said opening and engageable with said opening-bearing jaw for applying force thereto; a threaded fulcrum-forming member threaded through the other of said jaws and engageable with said lever rearwardly of said force-applying portion, for, upon rocking of the same in one direction, providing an adjustable

fulcrum therefor and delivering a thrust to the other of said jaws.

2. In an electrode holder of the class described, a pair of resilient clamping jaws in superimposed relation secured together adjacent their rear ends and springable apart at their forward ends for the reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein intermediate its ends; a lever projected at its forward end through said opening; a force-applying portion on said end of said lever, extended beyond the area of said opening and engageable with said opening-bearing jaw for applying force thereto; and threaded means projected between said lever and the other of said jaws for providing a fulcrum for said lever rearwardly of the force-applying portion and bearing against said other jaw upon the rocking of said lever in one direction.

3. In an electrode holder of the class described, a pair of resilient clamping jaws secured together adjacent one of their ends in superimposed relation and spreadable apart at their opposite ends for the reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein intermediate its ends; a lever projected at its forward end through said opening; a force-applying portion on said end of said lever extended beyond the area of said opening and loosely engageable with said opening-bearing jaw for applying force thereto; a fulcrum-forming member positioned between said lever and the other of said jaws and engageable with said lever, rearwardly of said force-applying portion for providing a fulcrum for said lever and delivering a thrust to the other of said jaws, said lever being disconnected from each of said jaws; and means for preventing longitudinal movement of said lever while applying force.

4. In an electrode holder of the class described, a shank-forming portion; a pair of jaws projecting in superimposed relation forwardly of said shank-forming portion and springable apart at their forward ends for the reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a cross-head lying between said jaws and extending beyond opposite sides of said opening; a lever connected at its forward end to said cross-head and projected rearwardly therefrom through said opening; fulcrum-forming means projecting between the inner face of said lever and the inner face of the other of said jaws for engaging with and providing a fulcrum for said lever, rearwardly of said cross-head and for delivering a thrust to said other jaw in one direction upon rocking of said lever in one direction, said cross head applying thrust to said opening-bearing jaw in the opposite direction.

5. In an electrode holder of the class described, a shank-forming portion; a pair of jaws projecting in superimposed relation forwardly of said shank-forming portion and springable apart at their forward ends for the reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a cross-head lying between said jaws and extending beyond opposite sides of said opening; a lever connected at its forward end to said cross-head and projected rearwardly therefrom through said opening; fulcrum-forming means projecting between the inner face of said lever and the inner face of the other of said jaws for engaging with and providing a fulcrum for said lever, rearwardly

of said cross-head and for delivering a thrust to said other jaw in one direction upon rocking of said lever in one direction, said cross head applying thrust to said opening-bearing jaw in the opposite direction; and means on said opening-bearing jaw cooperating with said cross head for resisting longitudinal movement of said lever relatively to said jaws.

6. In an electrode holder of the class described, a shank-forming portion; a pair of jaws projecting in superimposed relation forwardly of said shank-forming portion and spreadable apart at their forward ends for the reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a lever projected at one end through said opening; a hook carried by said end of said lever and engageable with said opening-bearing jaw for preventing movement of said lever longitudinally thereof; a fulcrum-forming means positioned between the other of said jaws and said lever for forming a fulcrum for said lever and delivering an outward thrust to said other jaw, said lever being disconnected from both of said jaws.

7. In an electrode holder of the class described, a pair of resilient jaws secured together adjacent one of their ends in superimposed relation and spreadable apart adjacent their free ends for the reception of an electrode wire to be clamped therebetween, one of said jaws having a slot formed therein; a cross-head lying between said jaws and straddling said slot and loosely engaging said jaws; a lever secured at its forward end to said cross-head and projecting therefrom rearwardly thereof through said slot; and a boss on the inner face of the other of said jaws engageable with said lever, rearwardly of said cross-head, upon rocking of said lever a predetermined distance in one direction for providing a fulcrum therefor and delivering a thrust in one direction to the other of said jaws, said cross-head delivering a thrust to the opening-bearing jaw in the opposite direction.

8. In an electrode holder of the class described, a pair of gripping jaws in superimposed relation, secured together at one of their ends and springable apart adjacent their opposite ends for reception of an electrode to be clamped therebetween and normally urged to closed position at their free ends, one of said jaws having a pair of longitudinally spaced openings formed therein intermediate its ends; a lever projected through the rear opening and having a hook-forming portion engaging in the forward opening; a fulcrum-forming member positioned between said lever and the other of said jaws for forming a fulcrum for said lever and applying thrust to said other jaw upon rocking of said lever in one direction, said lever applying force to said opening-bearing jaw at the portion thereof between said openings.

9. In an electrode holder of the class described, a shank-forming portion; a pair of resilient jaws projecting in superimposed relation forwardly of said shank-forming portion and springable apart at their forward ends for the reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a lever projected at one end through said opening; a cross-head carried by said lever and lying between said jaws and extending transversely of said jaws and projecting beyond opposite sides of said opening; fulcrum-forming means projected between the inner face of said lever and the inner face of the other of said

jaws, rearwardly of said cross-head, for limiting rocking movement of said lever in one direction and cooperating with said lever and said other jaw for, upon rocking of said lever in said direction beyond a predetermined distance, spreading said jaws apart.

10. In an electrode holder of the class described, a pair of jaws in superimposed relation normally in engagement with each other and springable apart at their forward ends for reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a lever projecting at one end through said opening; a cross-head carried by one end of said lever and lying between said jaws and straddling said opening; a threaded member carried by said lever rearwardly of and spaced from said cross-head and projectable beyond the inner face of said lever and adapted, upon rocking of said lever in one direction, for engaging the inner face of the other of said jaws and forcing said jaws apart.

11. In an electrode holder of the class described, a pair of jaws secured together at their rear ends and in superimposed relation and spreadable apart, against the resiliency thereof, adjacent their forward ends for reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a lever projecting at one end through said opening; bearing means carried by said projecting end of said lever and lying between said jaws and extending beyond the area of said opening and bearing against said opening-bearing jaw; and a fulcrum-forming member between the other of said jaws and said lever, spaced rearwardly of said bearing means for forming a fulcrum for said lever, upon rocking of the same in one direction, the rocking of said lever in said direction beyond a predetermined distance effecting a spreading apart of said jaws, said lever being disconnected from both of said jaws.

12. In an electrode holder of the class described, a pair of clamping jaws secured together at one of their ends and extending in superimposed registering relation and normally urged, by the resiliency thereof, into close engagement and spreadable apart at their free ends for reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein intermediate its ends; a lever projected at its forward end through said opening; a force-applying portion on said end of said lever extended beyond said opening for applying force to the under surface of said opening-bearing jaw; and a fulcrum-forming means spaced rearwardly of said force-applying portion and positioned between said lever and the other of said jaws and loosely engaging said lever for delivering a spreading thrust to said other jaw, upon rocking of said lever in one direction said lever being disconnected from both of said jaws.

13. In an electrode holder of the class described, a pair of clamping jaws secured together at one of their ends and extending in superimposed registering relation and normally urged, by the resiliency thereof, into close engagement and spreadable apart at their free ends for reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein intermediate its ends; a lever projected at its forward end through said opening; a force-applying portion on said end of said lever extended beyond said opening for ap-

plying force to the inner surface of said opening-bearing jaw; a furcrum-forming means spaced rearwardly of said force-applying portion and positioned between said lever and the other of said jaws for delivering a spreading thrust thereto, upon rocking of said lever in one direction, said lever being disconnected from both of said jaws; and resilient means for normally resisting rocking of said lever in the opposite direction.

14. In an electrode holder of the class described, a shank-forming portion for attachment to an electric conductor; a pair of jaws projecting in superimposed relation forwardly of said shank-forming portion and normally spring pressed into engagement at opposed faces and spreadable apart at their forward ends for the reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a lever projected at its forward end through said opening and engaging between opposed faces of said jaws and extending at its rear end rearwardly from said opening; laterally projecting means on the forward end of said lever, said lever being freely rockable on said laterally projected means as an axis without disturbing the relation of said jaws; and an engagement portion on said lever rearwardly of said laterally projecting means for, upon rocking of said lever in one direction a predetermined distance, delivering a thrust outwardly to the inner face of said other jaw, said laterally projecting means, upon rocking of said lever beyond said predetermined distance, delivering an outward thrust to the inner face of said opening-bearing jaw.

15. In an electrode holder of the class described, a shank-forming portion adapted for attachment to an electric conductor; a pair of jaws projecting in superimposed relation forwardly of said shank-forming portion and spreadable apart at their forward ends for reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a lever non-attached to either of said jaws and projected at its forward end through said opening and extending rearwardly therefrom; a bearing portion on said lever adjacent its forward end for delivering an outward thrust to the inner face of said opening-bearing jaw, upon rocking of said lever in one direction; and a bearing portion on said lever rearwardly of said first mentioned bearing portion for bearing against the inner face of the other of said jaws and delivering an outward thrust thereto.

16. In an electrode holder of the class described, a shank-forming portion adapted for attachment to an electric conductor; a pair of jaws projecting in superimposed relation forwardly of said shank-forming portion and spreadable apart at their forward ends for reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a lever non-attached to either of said jaws and projected at its forward end through said opening and extending rearwardly therefrom; a bearing portion on said lever adjacent its forward end for delivering an outward thrust to the inner face of said opening-bearing jaw, upon rocking of said lever

in one direction; a bearing portion on said lever rearwardly of said first mentioned bearing portion for bearing against the inner face of the other of said jaws and delivering an outward thrust thereto, said lever being freely rockable in the opposite direction.

17. In an electrode holder of the class described, a shank-forming portion adapted for attachment to an electric conductor; a pair of jaws projecting in superimposed relation forwardly of said shank-forming portion and spreadable apart at their forward ends for reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a lever non-attached to either of said jaws and projected at its forward end through said opening and extending rearwardly therefrom; a bearing portion on said lever adjacent its forward end for delivering an outward thrust to the inner face of said opening-bearing jaw, upon rocking of said lever in one direction; a bearing portion on said lever rearwardly of said first mentioned bearing portion for bearing against the inner face of the other of said jaws and delivering an outward thrust thereto, said lever being freely rockable in the opposite direction, the rocking of said lever beyond a predetermined distance in the opposite direction effecting a disengagement of the same from said opening.

18. In an electrode holder of the class described, a shank-forming portion adapted for attachment to an electric conductor; a pair of jaws projecting in superimposed registering relation forwardly of said shank-forming portion and connected thereto and spreadable apart at their forward ends for reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a spreading mechanism engaged between said jaws for spreading the same apart and embodying an elongated member projecting outwardly through said opening and rearwardly therefrom and adapted upon downward rocking for spreading said jaws apart; and a handle embracing said shank-forming portion and projecting forwardly therefrom sufficient for overlying and covering said opening in said jaw.

19. In an electrode holder of the class described, a shank-forming portion adapted for attachment to an electric conductor; a pair of jaws projecting in superimposed registering relation forwardly of said shank-forming portion and connected thereto and spreadable apart at their forward ends for reception of an electrode wire to be clamped therebetween, one of said jaws having an opening formed therein; a spreading mechanism engaged between said jaws for spreading the same apart and embodying an elongated member projecting outwardly through said opening and rearwardly therefrom and adapted upon downward rocking for spreading said jaws apart; and a handle embracing said shank-forming portion and projecting forwardly therefrom sufficient for overlying and covering said opening in said jaw, said handle having a slot formed therein adjacent its forward end, said elongated member projecting through said slot.

PHILIP BOURQUE.